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PATENT  
Docket No. SPLX.P0002

**CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on August 9, 2004.

Mani Adhikari

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the application of:

Steven Teig, et al.

Serial No.: 09/731,891

Filing Date: 12/06/2000

For: **METHOD AND APPARATUS FOR  
CONSIDERING DIAGONAL WIRING  
IN PLACEMENT**

**TRANSMITTAL LETTER**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Enclosed you will find the following documents:

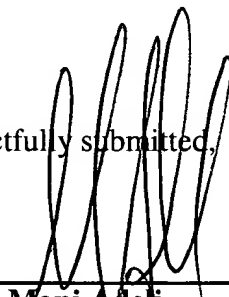
1. Statement Under 37 CFR 3.73 (B)
2. Power of Attorney
3. Copy of an Assignment
4. Copy of Certificate of Merger

Attached is the Power of Attorney, which appoints Stattler Johansen & Adeli LLP as the patent attorneys for this application. Also, attached is a copy of the Assignment from the inventors to Simplex Solutions, Inc. A true copy of the assignment document(s)

is attached hereto, the original of which has been (or is herewith) forwarded to the United States Patent and Trademark Office for recording. Also, attached is a copy of the Certificate of Merger, merging Simplex Solutions, Inc. into Cadence Design Systems, Inc. A copy of the Certificate of Merger is being forwarded concurrently herewith to the Assignment branch for recordation.

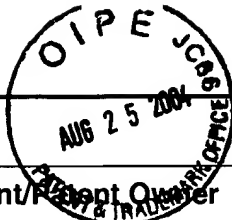
Dated: August 8, 2004  
20

Respectfully submitted,

By:   
Mani Adeli  
Registration No. 39,585

Stattler, Johansen & Adeli LLP  
P.O. Box 51860  
Palo Alto, CA 94303-0728

Phone No. (650) 752-0990 x102  
Fax No. (650) 752-0995



## STATEMENT UNDER 37 CFR 3.73(B)

|                             |   |
|-----------------------------|---|
| Applicant/Patent Owner      | Simplex Solutions, Inc.   |
| Application No./Patent No.: | 09/731,891  |
| Filed/Issue Date:           | 12/6/00   |
| Title:                      | Method and Apparatus for Considering Diagonal Wiring in Placement |
| Docket Number               | SPLX.P0002  |

Cadence Design Systems, Inc., a corporation, states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
  2. ☐ an assignee of less than the entire right, title and interest.  
The extent (by, percentage) of its ownership interest is \_\_\_\_\_%  
in the patent application/patent identified above by virtue of either:
    - A. ☐ An assignment from the inventor(s) of the patent application/patent identified above.  
The assignment was recorded in the United States Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.
- OR
- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:
    1. From: Steven Teig et al. To: Simplex Solutions, Inc.  
A copy of an assignment from Steven Teig and Joseph L. Ganley to Simplex Solutions, Inc. is attached.
    2. From: Simplex Solutions, Inc. To: Cadence Design Systems, Inc.  
A copy of a Certificate of Merger, merging Simplex Solutions, Inc. into Cadence Design Systems, Inc. is attached.
- ☒ Copies of assignments or other documents in the chain of title are attached.  
[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

October 30, 2003

Date

(408) 943-1234

Telephone Number

Peter Chen

Typed or printed name

Signature

Vice President

Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.  
SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Steven Teig

Serial No.: 09/731,891

Filing Date: 12/6/00

For: METHOD AND APPARATUS FOR  
CONSIDERING DIAGONAL WIRING IN  
PLACEMENT



PATENT APPLICATION

**POWER OF ATTORNEY BY ASSIGNEE UNDER 37 C.F.R. §§3.71, 3.73(b)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The below-identified Assignee is the owner of the entire right, title and interest in the above-identified patent application by virtue of an assignment from the inventor(s).

- ☒ A true copy of the assignment document(s) is attached hereto, the original of which has been (or is herewith) forwarded to the United States Patent and Trademark Office for recording.

The undersigned (whose title is supplied below) is empowered to sign this statement on behalf of the Assignee.

Assignee hereby appoints John C. Stattler, Reg. No. 36,285; Dag Johansen, Reg. No. 36,172; Mani Adeli, Reg. No. 39,585; Jeffrey A. McKinney, Reg. No. 43,795; Gregory Suh, Reg. No. 48,187; my patent attorneys, and other attorneys of STATTLER JOHANSEN & ADELI LLP with offices located at 540 University Ave - Suite 350, Palo Alto, California 94301 to prosecute this application and all subsequent continuation or divisional applications, and transact all business in the United States Patent & Trademark Office connected therewith; said appointment to be to the exclusion of the inventor(s) and the inventor's(s') attorney(s) in accordance with the provisions of 37 C.F.R. §3.71.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Please address all correspondence and telephone calls to:

Mani Adeli, Esq.  
STATTLER JOHANSEN & ADELI LLP  
P.O. Box 51860  
Palo Alto, California 94303-0728

Telephone: (650) 752-0990, ext. 102  
Fax: (650) 752-0995

Assignee: Cadence Design Systems, Inc.

Name: Peter Chen

Title: Vice President of Intellectual Property

Signature: \_\_\_\_\_

Date: October 30, 2003

## JOINT INVENTORS TO CORPORATION ASSIGNMENT

WHEREAS, the undersigned Inventors:

- (1) Steven Teig, a resident of Menlo Park, CA;
- (2) Joseph L. Ganley, a resident of Vienna, VA;

**COPY**

have invented certain new and useful improvements in:

### METHOD AND APPARATUS FOR CONSIDERING DIAGONAL WIRING IN PLACEMENT

and have executed a declaration or oath on even date herewith for an application for a United States patent disclosing and identifying the invention:

- ☒ Said application having SC/Serial Number 09/731,891 and filed on December 6, 2000.

WHEREAS Simplex Solutions, Inc. (hereinafter termed "Assignee"), a corporation of the State of Delaware, having a place of business at 521 Almanor Ave., Sunnyvale, CA 94086, wishes to acquire the entire right, title and interest in and to said application and the invention disclosed therein, and in and to all embodiments of the invention, heretofore conceived, made or discovered jointly or severally by said Inventors (all collectively hereinafter termed "said invention"), and in and to any and all patents, certificates of invention and other forms of protection thereon (hereinafter termed "patents") applied for or granted in the United States and/or other countries.

NOW THEREFORE, for good and valuable consideration acknowledged by each of said Inventors to have been received in full from said Assignee:

1. Said Inventors do hereby sell, assign, transfer and convey to said Assignee, the entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply in any or all countries of the world for patents, certificates of inventions or other governmental grants on said invention, including the right to apply for patents pursuant to the International Convention for the Protection of Industrial Property or pursuant to any other convention, treaty, agreement or understanding; (c) in and to any and all applications filed and any and all patents, certificates of inventions or other governmental grants granted on said invention in the United States or any other country, including each and every application filed and each and every patent granted on any application which is a division, substitution, or continuation of any of said applications; (d) in and to each and every reissue or extension of any of said patents; and (e) in and to each and every patent claim resulting from a reexamination certificate for any and all of said patents.

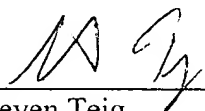
2. Said Inventors hereby jointly and severally covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest herein conveyed in the United States and other countries. Such cooperation by said Inventors

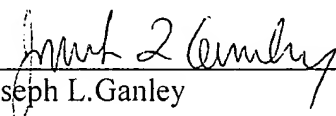
shall include prompt production of pertinent facts and documents, giving of testimony, executing of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for complying with any duty of disclosure; (c) for prosecuting any of said applications; (d) for filing and prosecuting substitute, divisional, continuing or additional applications covering said invention; (e) for filing and prosecuting applications for reissue of any of said patents; (f) for interference or other priority proceedings involving said invention; and (g) for legal proceedings involving said invention and any applications therefor and any patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, reexamination proceedings, compulsory licensing proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Inventors in providing such cooperation shall be paid for by said Assignee.

3. The terms and covenants of this Assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Inventors, their respective heirs, legal representatives, and assigns.

4. Said Inventors hereby jointly and severally warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

IN WITNESS WHEREOF, the said Inventors have executed this instrument on the date of acknowledgement as given below and delivered this instrument to said Assignee.

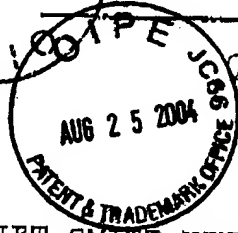
(1)  7-25-01  
Steven Teig Date

(2)  7-25-01  
Joseph L. Ganley Date



# Delaware

PAGE 1



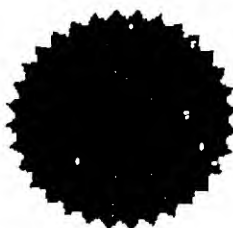
*The First State*

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF OWNERSHIP, WHICH MERGES:

"SIMPLEX SOLUTIONS, INC.", A DELAWARE CORPORATION,

WITH AND INTO "CADENCE DESIGN SYSTEMS, INC." UNDER THE NAME OF "CADENCE DESIGN SYSTEMS, INC.", A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED AND FILED IN THIS OFFICE THE THIRTIETH DAY OF SEPTEMBER, A.D. 2002, AT 3 O'CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.



*Harriet Smith Windsor*  
Harriet Smith Windsor, Secretary of State

2122896 8100M

020606417

AUTHENTICATION: 2012336

DATE: 10-01-02





STATE OF DELAWARE  
SECRETARY OF STATE  
DIVISION OF CORPORATIONS  
FILED 03:00 PM 09/30/2002  
020606417 - 2122896

**CERTIFICATE OF OWNERSHIP  
MERGING  
SIMPLEX SOLUTIONS, INC.  
(a Delaware corporation)  
WITH AND INTO  
CADENCE DESIGN SYSTEMS, INC.  
(a Delaware corporation)**

**PURSUANT TO SECTION 253 OF THE  
GENERAL CORPORATION LAW OF DELAWARE**

Cadence Design Systems, Inc., a corporation incorporated on April 8, 1987 pursuant to the provisions of the General Corporation Law of the State of Delaware (the "Corporation"), does hereby certify the following:

**FIRST:** That, as of the date hereof, this Corporation (the "Surviving Corporation") owns all (100%) of the outstanding capital stock of Simplex Solutions, Inc. ("Simplex"), a corporation incorporated under the laws of the State of Delaware.

**SECOND:** That this Corporation, by a resolution of its Board of Directors duly adopted on the 21<sup>st</sup> day of September, 2002, determined to and, subject to the conditions set forth in such resolutions, does merge Simplex into itself, to be effective upon the filing of this Certificate with the Delaware Secretary of State (the "Merger"):

**APPROVAL AND AUTHORIZATION OF MERGER WITH SIMPLEX SOLUTIONS, INC.**

WHEREAS, Simplex Solutions, Inc. ("Simplex"), a Delaware corporation, is a 100% wholly-owned subsidiary of the Corporation;

WHEREAS, it is proposed that the ownership and operation of the Corporation and Simplex be consolidated; and

WHEREAS, to effect such consolidation, it is deemed in the best interests of the Corporation to merge Simplex, with and into the Corporation (the "Merger") and pursuant to which: (i) effective upon filing of the Certificate of Ownership with the Delaware Secretary of State, Simplex would merge with and into the Corporation with the Corporation continuing its corporate existence as the surviving corporation of the merger; (ii) Simplex would cease to exist as a separate corporation; (iii) each outstanding share of capital stock of Simplex would automatically be canceled; (iv) all assets of Simplex would be transferred to and vested in the Corporation by operation of law and (v) all debts and liabilities of Simplex would be assigned to and assumed by the Corporation by operation of law.

NOW, THEREFORE, BE IT RESOLVED, that the Merger is hereby approved and authorized;

RESOLVED FURTHER, that each officer of the Corporation, acting alone or in concert, is hereby authorized and directed, in the name and on behalf of the Corporation, to take such action as necessary to carry the Merger into effect and cancel the shares of outstanding capital stock of Simplex;

RESOLVED FURTHER, that each officer of the Corporation acting alone or in concert, is hereby authorized and directed, in the name and on behalf of the Corporation, to prepare, execute and deliver or file such other documents and to take such further actions, including without limitation the preparation, execution and filing of a certificate of ownership with the Delaware Secretary of State, as such officer may deem necessary or proper in order to consummate the Merger, such necessity or propriety to be conclusively evidenced by such officer's execution, delivery or filing of such documents or taking of such actions;

RESOLVED FURTHER, that any officer of the Corporation, acting alone or in concert, is hereby authorized and directed, in the name and on behalf of the Corporation, to prepare, execute and deliver such documents and to take such actions as such officer may deem necessary or proper in order to obtain any required contractual consents to the Merger from third parties, such necessity or propriety to be conclusively evidenced by such officer's execution or delivery of such documents or taking of such actions;

RESOLVED FURTHER, that any officer of the Corporation, and each of them severally, is hereby authorized to take from time to time any and all such action and to execute and deliver from time to time any and all further papers, instruments, requests, receipts, applications, reports, certificates and other documents as may be deemed necessary or advisable in the opinion of any such officer to effectuate and consummate the Merger and any other transactions contemplated thereby;

RESOLVED FURTHER, that the foregoing resolutions shall also serve as evidence of the Corporation's authorization and approval of the Merger acting as the sole stockholder of Simplex.


THIRD: No other approvals of the Merger are required under Delaware law.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the undersigned has executed and subscribed to this Certificate of Ownership on behalf of Cadence Design Systems, Inc. as its authorized officer and hereby affirms, under the penalties of perjury, that this Certificate of Ownership is the act and deed of such corporation and that the facts stated herein are true.

DATED: September 21, 2002

CADENCE DESIGN SYSTEMS, INC.  
a Delaware Corporation

By:   
R.L. Smith McKeithen  
Senior Vice President, General Counsel and  
Secretary